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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/942,509 | 08/29/2001 | Christopher B. Weare | MSFT-0586/167513.2 | 9603 |

7590 04/22/2005

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| EXAMINER |
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FLANDERS, ANDREW C

| ART UNIT | PAPER NUMBER |
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2644

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,509

Applicant(s)

WEARE ET AL.

Examiner

Andrew C Flanders

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-24 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-21 and 25-37 is/are rejected.
- 7) ☒ Claim(s) 3 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 25 – 37** are rejected under 35 U.S.C. 102(e) as being anticipated by Blum (U.S. Patent 5,918,223).

Regarding **Claims 25 and 31 - 33**, Blum discloses a method of classifying data according to melodic movement properties of the data, comprising:

assigning to each media entity of a plurality of media entities in a data set to at least one melodic movement class (See column 6, lines 45-62, and see column 5, lines 50-62)

processing each media entity of said data set to extract at least one melodic movement class based on digital signal processing of each media entity (See column 3, lines 5-67, also see column 17, lines 9-63, and see column 22, lines 37-67);

generating a plurality of melodic movement properties vectors for said plurality of media entities, wherein each melodic movement properties vector includes said at least one melodic movement class and at least one melodic movement class based on digital signal processing (See column 24, lines 10-25, also see column 6, lines 13-38); and

forming a classification chain based upon said plurality of feature vectors (See column 25, lines 7-32, also see column 25, lines 35-67).

Regarding **Claim 26**, in addition to the elements stated above regarding claim 25, Blum discloses:

processing an unclassified media entity to extract at least one melodic movement class based on digital signal processing of the unclassified media entity (See column 3, lines 5-67, also see column 17, lines 9-63, and see column 22, lines 37-67)⁴

generating a vector for the unclassified media entity including said at least one digital signal processing melodic movement class (See column 6, lines 13-38);

presenting the vector for the unclassified media entity to the classification chain (See column 24, lines 10-25); and

classifying the unclassified entry with an estimate of the melodic movement class by calculating the representative melodic movement class of the subset of the plurality of vectors of the classification chain located in the neighborhood of the vector for the unclassified entity (See column 23, lines 10-67).

Regarding **Claim 27**, in addition to the elements stated above regarding claim 26, Blum discloses including calculating a neighborhood distance that defines a distance within which two vectors in the classification chain space are in the same neighborhood for purposes of being in the same melodic movement class (See column 25, lines 7-32, also see column 25, lines 35-67).

Regarding **Claim 28**, in addition to the elements stated above regarding claim 26, Blum further discloses wherein said classifying of the unclassified entry includes

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classifying the unclassified entity with a median melodic movement class represented by the neighborhood (See column 25, lines 58-67, and see column 26, lines 1-45).

Regarding **Claim 29**, in addition to the elements stated above regarding claim 26, Blum further discloses wherein said melodic movement class is described by a numerical value and said classifying of the unclassified entry includes classifying the unclassified entry with a mean of numerical melodic movement properties values found in the neighborhood (See column 25, lines 7-32, also see column 25, lines 35-67).

Regarding **Claim 30**, in addition to the elements stated above regarding claim 26, Blum further discloses wherein said classifying includes retuning at least one number indicating the level of confidence of the melodic movement class estimate (See column 11, lines 1-67, and see column 12, lines 1-50, also see column 17, lines 20- 65).

Regarding **Claim 34**, Blum discloses a computing device including:

a classification chain data structure stored thereon having a plurality of classification vectors, wherein each vector includes data representative of a melodic movement class as classified by humans and melodic movement characteristics as determined by digital signal processing (See column 3, lines 5-67, also see column 17, lines 9-63)., and

processing means for comparing an unclassified media entity to the classification chain data structure to determine an estimate of the melodic movement class of the unclassified media entity (See column 22, lines 31-67).

Regarding **Claim 35**, in addition to the elements stated above regarding claim 34, Blum further discloses wherein said determining of an estimate of the melodic

movement class includes returning at least one number indicating the level of confidence of the melodic movement class assignment (See column 14, lines 2 1-36).

Regarding **Claim 36**, in addition to the elements stated above regarding claim 35, Blum discloses wherein the performance level of the classification chain improves over time due to the examination of unclassified media entities that have a low confidence level associated with the melodic movement class assignment (See column 23, lines 10-67, and see column 23, lines 1-67, and see column 24, lines 7).

Regarding **Claim 37**, Blum discloses a classification chain data structure utilized in connection with the classification of consonance of new unclassified media entities, comprising:

a plurality of classification vectors (See column 3, lines 5-34), wherein each vector includes:

melodic movement properties data as classified by humans (See column 3, lines 30-67)', and

melodic movement properties data determined by digital signal processing techniques (See column 6, lines 14-67).

Allowable Subject Matter

Claims 3 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22 – 24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Blum, which is considered to be the closest prior art, discloses all elements of claim 22 except for detecting the energies in the spectrum for each frame of a digital audio file. Therefore, the claim is allowable.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1, 2, 4 – 9, 11 – 21, and 25 - 37 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 2 and 4 - 33 of copending Application No. 09/900,059. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claims 25 – 37 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 - 13 of copending Application No. 10/986,975. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claims 25 and 26 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 and 6 of copending Application No. 09/934,071. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claims 25 - 37 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 21 - 33 of copending Application No. 09/935,349. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claims 25 and 26 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 19 and 20 of prior U.S. Patent No. 6,657,117. This is a double patenting rejection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SUPERVISORY PATENT EXAMINER